**1.1**

1. Name and distinguish between the two broad subdivisions of geology.

2. List at least three different geologic hazards.

3. Aside from geologic hazards, describe another important connection between people and geology.

**Geology-**

**Physical Geology-**

**Historical Geology-**

**1.2**

1. Describe Aristotle's influence on geology.

2. Contrast catastrophism and uniformitarianism.How did each view the age of Earth?

3. How old is Earth?

4. Refer to figure 1.6 and list the eon, era, period, and epoch in which we live.

5. Why is an understanding of the magnitude of geologic time important for a geologist?

**Catastrophism –**

**Uniformitarianism -**

**1.3**

1. How is a scientific hypothesis different from a scientific theory?

2. Summarize the basic steps followed in many scientific investigations.

3. What explains the fact that continental drift is considered a hypothesis but plate tectonics is considered a theory?

**Hypothesis-**

**Theory-**

**1.4**

1. List and describe Earth's four major spheres.

**Hydrosphere-**

**Atmosphere-**

**Biosphere-**

**Geosphere-**

2. Compare the height of the atmosphere to the thickness of the geosphere.

3. How much of earth's surface do oceans cover? What percentage of Earth's total water supply do oceans represent?

4.To which sphere does soil belong?

**1.5**

1. What is a system? List 3 examples.

2. What are the two sources of energy for the Earth's system?

3. Predict how a change in the hydrologic cycle, such as increased rainfall in an area, might influence the biosphere and geosphere in that area.

**Earth system science-**

**System-**

**1.6**

1. Name and briefly outline the theory that describes the formation of our solar system.

2. List the inner planets and outer planets. Describe basic differences in size and composition.

3. Explain why density and buoyancy were important in the development of Earth's layered structure.  

**Nebular theory-**

**Solar nebula-**

**1.7**

1. List and describe the three major layers of Earth defined by their chemical composition.

2. Contrast the lithosphere and asthenosphere.

3. Distinguish between the outer core and the inner core.

**Crust-**

**Mantle-**

**Lithosphere-**

**Asthenosphere-**

**Transition zone-**

**Lower mantle-**

**Core-**

**Outer core-**

**Inner core-**

**1.8**

1.List two rock characteristics that are used to determine the processes that created a rock.

2. Sketch and label a basic rock cycle. Make sure to include alternate paths.

3. Use the rock cycle to explain the statement “one rock is the raw material for another.”

**Rock cycle-**

**Igneous rock-**

**Sediment-**

**Sedimentary rock-**

**Metamorphic rock-**

**1.9**

1. Compare and contrast continents and ocean basins.

2. Describe the general distribution of Earth's youngest mountains.

3. What is the difference between shields and stable platforms?

4. What are the three major regions of the ocean floor, and what are some features associated with each?

**Ocean basin-**

**Mountain belt-**

**Craton-**

**Shield-**

**Stable platform-**

**Continental margin-**

**Continental shelf-**

**Continental slope-**

**Continental rise-**

**Deep ocean basin-**

**Abyssal plain-**

**Deep ocean trench-**

**Seamount-**

**Oceanic ridge (mid-ocean ridge)-**